PROGRESS
OF
MEDICAL SCIENCE

MEDICINE

UNDER THE CHARGE OF
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The Successful Cultivation of Leishmania Donovani from the Blood.—M. MAYER and H. WERNER (*Deutsch. med. Woch.*, 1914, xl, 67) have had under observation a patient suffering with tropical splenomegaly (kala-azar). Diagnosis was made by the finding of Leishmania donovani in the material obtained by splenic puncture; the organisms were cultivated from this material on Nicolle's modification of the Novy-MacNeal medium. The discovery of the parasites in the peripheral blood is usually possible only in the late stages of the disease; in the early stages it is only after prolonged search, and then only exceptionally, that the organisms are found. The authors inoculated a dozen tubes of media with the patient's blood, adding three to five drops to each tube. The tubes were examined every eight days, and after one month five tubes showed a growth of Leishmania donovani. The demonstration of viable parasites in the peripheral circulation is of considerable importance because of the possibility of the transfer of infection by blood-sucking insects. Novy has succeeded in cultivating the organisms from the blood of experimentally infected dogs, but the authors have been unable to find a report of a successful culture from human cases.

Hypercholesterinemia and its Role in the Production of Gall-stones.—According to CHAUFFARD and his pupil, Grigaut (*Presse. Méd.*, xxi, 929 to 932), whose method was used in the cholesterin determinations, there occurs a true hypercholsterinemia in cases of jaundice, gall-stones, typhoid fever, and pregnancy. In typhoid fever this develops after the febrile period and becomes maximum at about the seventh month of pregnancy. The cause in these conditions is to be found in a hyperactivity of the adrenals, and perhaps in the corpus luteum as well. It is clearly recognized that typhoid and pregnancy are potent predisposing causes of gall-stones, an essential condition for the formation of which is an excessive blood content in cholesterin. The author calls attention to the exogenous or dietetic origin of cholesterin, since this has some therapeutic importance, and the endogenous, arising mainly from the adrenal glands. A normal function of the liver is to rid the blood of a certain amount of cholesterin, this being excreted in the bile through the specific activity of highly specialized hepatic cells, which may further convert some of it into solvents for cholesterin itself, namely the biliary acids. When these cells fail in their normal functioning, as in cholelithiasis, one finds the adrenals unusually deficient in cholesterin, while the blood contains an increased amount and the bile is deficient in its acid content. Since all these things are evidences of one and the same thing—hepatic insufficiency—one may attribute the formation of gall-stones to a specific disturbance of certain liver cells.

Experimental Production of Pernicious Anemia.—Adler (*Jour. of Med. Research,* xxviii, 199 to 226), having determined that the severe anemia caused by infections with Dibothriocephalus latus is due to the presence of an insoluble fatty acid capable of producing hemolysis, has been able to produce the blood picture of pernicious anemia by feeding dogs large doses of insoluble fatty acids, such as olive oil. The organism normally possesses a defensive mechanism against such acids in the shape of lymph glands, according to the author. As the result of experiments the author concludes that fatty acids are toxic directly in proportion to their insolubility. Animals given non-toxic doses over a long period of time showed some typical blood crises such as are seen in pernicious anemia. The simulataneous administration of suitable amounts of quinine protects the animals from the poisonous effects of the fats. The anemia induced is essentially due to the destructive action upon the circulating red-blood cells, for in the early stages at least the bone-marrow appears to be stimulated so that high red counts may occur. The opinion is advanced that the hemolytic substance occurs in the form of colloidal particles the effects of which depend probably upon the relation of their number to that of the red-blood corpuscles.

A Contribution to the Study of Cancer.—E. Weiss (*Deutsch. med. Woch.,* 1914, xl, 66), alludes to the possibilities of the Abderhalden test as applied to the diagnosis of cancer. The author has made interesting observations which bear on the diagnosis of gastric cancer. He finds that normal individuals, after the parenteral administration of anatomically normal gastric mucosa, develops ferments in the blood serum specific for this tissue. Repeating the experiments with the sera from two patients suffering with cancer of the stomach, he found that there was a failure to develop these ferments. If the observations prove correct when repeated with a large number of cases, he believes it may be possible to apply the method as an exact differential diagnostic aid.